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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,432	12/23/2003	Kaoru Yamaki	0425-1101P	7534

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
ANDREWS, MELVYN J	
ART UNIT	**PAPER NUMBER**
1742	

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/743,432	YAMAKI ET AL.	
	Examiner	Art Unit	
	Melvyn J. Andrews	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *32304&52004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: The reference to "any one of Claims 1 to 12" on page 3 is indefinite.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 to 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because there is no antecedent basis for "wire harnesses" on line 3; on line 5 the step of "grouping" is indefinite and the expression, "main metals" is indefinite because these metals are not defined ;on line 8 the expression "preceding steps" is indefinite; there is no antecedent basis for "gas generating materials inside the inflators" on lines 9 and 10; also it is not clear that a step of burning occurs by the step of charging.

Claim 2 is indefinite because there is no antecedent basis for "plastic parts" and "conducting heating treatment".

Claim 3 is indefinite because there is no antecedent basis for "step of conducting thermal treatment.

Claim 5 is indefinite because the expression "pyrotechnic inflator" and "hybrid-type inflator" are indefinite ; also "hybrid-type" is indefinite MPEP 2173.05(c) E.

Claim 6 is indefinite because there is no antecedent basis for "outer shell containers".

Claim 7 is indefinite because in (A) step there is no antecedent basis for "wire harnesses... in (B) step there is no antecedent basis for "plastic parts" ; in (C) step of grouping is unclear since the "main metals " are not defined. , also what does the expression "as occasion demand" mean ? in step (E) the expression "preceding steps" is indefinite.

Claim 8 is indfinite since it is unclear how the "main metals " and "shapes" are grouped "in the same receiving box"

Claim 8 is indefinite because the apparatus "indoor facility provide with a lighting rod" is not shown in the drawing.

Claim 10 is indefinite because there is no antecedent basis for "the step of conducting thermal treatment" and the step of "after inflator charging" or "the last inflator charging"; also what does "divisionally charging inflators plural times" mean ? and what does "time required to terminate treatment" mean ?

Claim 11 is indefinite because the expressions "inflator charging", "the last inflator charging when divisionally charging inflator plural times " , and "time required to terminate" are indefinite.

Claim 12 is indefinte because the step of "using a thermal treatment equipment..." is indefinite .

Claims 13 to 15 are indefinite because the procedural relationships of Claims 13-15 a metal recovering method with Claims 1 and 7 a high temperature treating method which requires that "the main metals constituting inflators do not melt" is unclear.

In Claim 14 the relationship of the step of "cutting " prior to the step of melting is unclear that is when are inflators cut?.

Claim 15 is indefinite because the claimed structure of the inflator is not shown.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

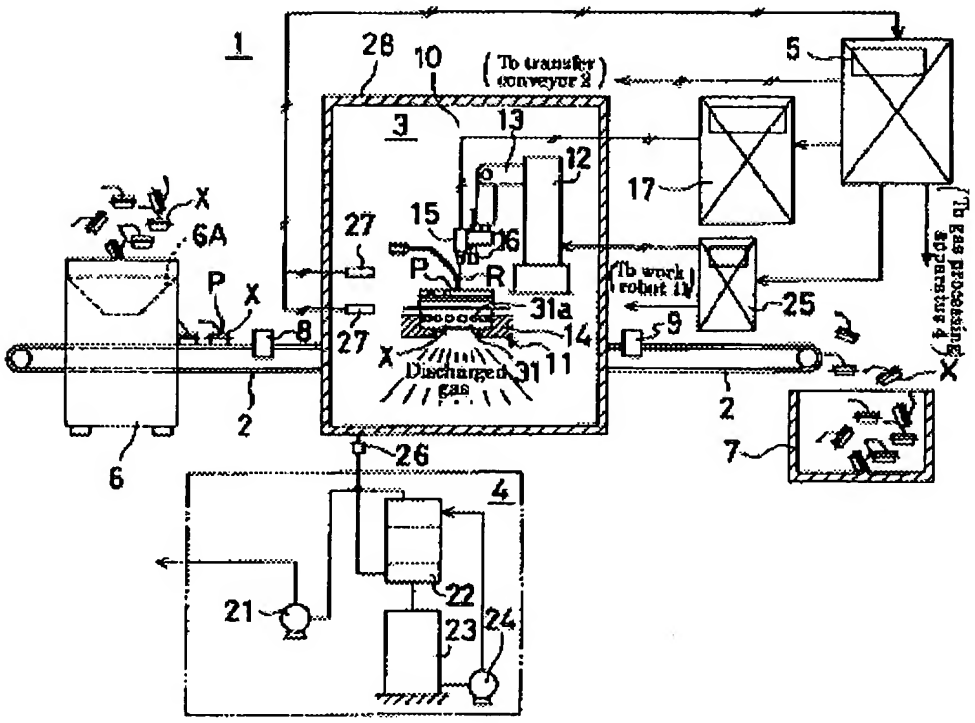
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al (US 6,425,934) in view of Katsumata et al (US 6,855,187) and Allerton III et al (US 5,294,244). Aoki et al disclose a gas generator disposal method and system as shown in Fig.1

Fig. 1

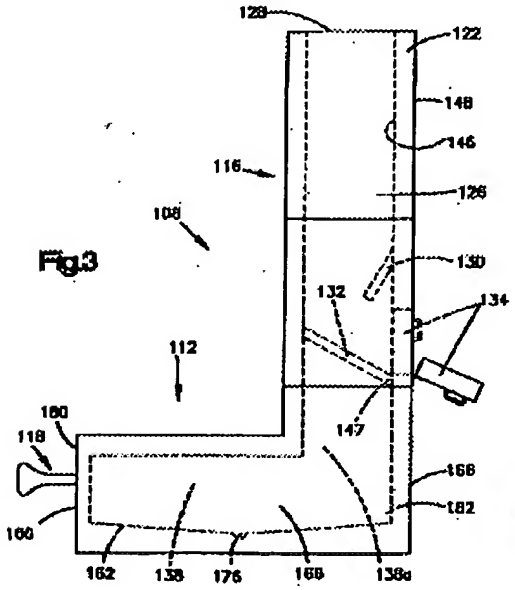


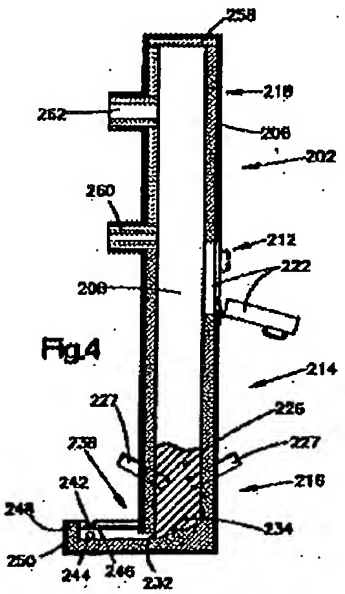
The Aoki et al method discloses " the processed gas generator X is transferred toward the work accommodating container 7" (col.7, lines 41-48) in view of which the claimed

"a step of charging" is obvious and as shown in Fig 1 the processed gas generators X are not melted .

Aoki does not explicitly disclose cutting and removing wire harnesses connected for inflation activation but does disclose "Unused gas generators including those detached from automobiles are screened" (col.6, lines 34 and 35) which suggests that "wire harnesses" connected to the Aoki et al gas generators may be separated in order to recycle waste wire harnesses as disclosed by Katsumata et al which may include wiring from a vehicle (col.1, lines 11 to 31).

With respect to Claims13-15 Aoki et al does not disclose melting the "processed gas generators X" but this feature is conventional as evidenced by Allerton III et al to recover aluminum using cupola shown in Fig 3 and stainless steel in Fig 4 (see Abstract and col.2, lines 14 to 21)





It would have been obvious to one of ordinary skill in the art at the time the invention was made to recover metals from air bag inflators in molten form since it is conventional as evidenced by Allerton III et al.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1 020 683 and EP 0 818 547. EP '683 discloses a method of processing inflator and recovering the metal case of the inflator (see Abstract) but does not disclose recovery of metal values from air bag inflators by cutting and grouping but these steps are disclosed by EP'547 (see Abstract) it would have been obvious to one of ordinary skill in the art at the time the invention was made to cut and group the EP' 683 metal values in order to recover a specific metal such as aluminum . With respect to Claims 13 to 15 EP'547 discloses smelting meatl values (see Abstract).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvyn J. Andrews whose telephone number is (571)272-1239. The examiner can normally be reached on 8:00A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on (571)272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Melvyn Andrews

MELVYN ANDREWS
PRIMARY EXAMINER

MJA
March 21, 2005